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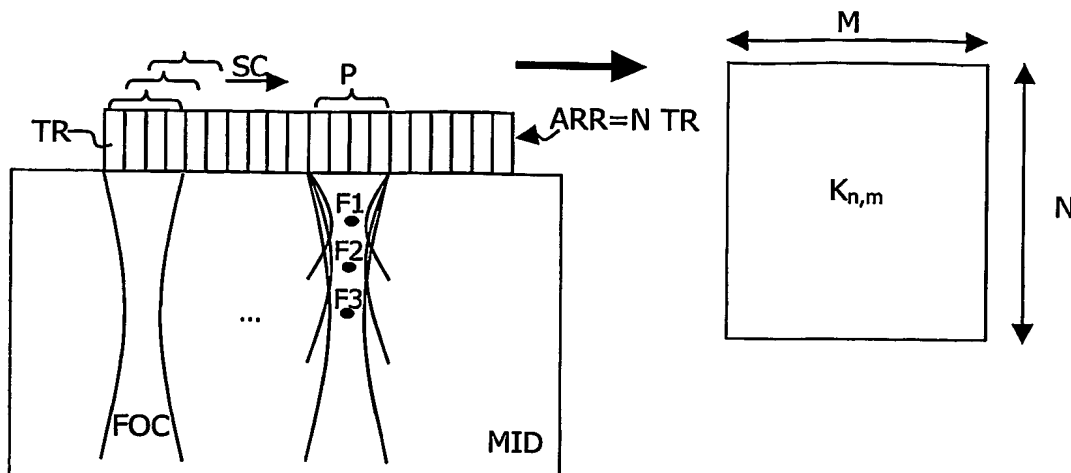
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(54) Title: DETECTION OF SMALL-SIZE DEFECTS IN MEDICAL ULTRASONIC IMAGING



(57) Abstract: The invention relates to an ultrasonic medical imaging apparatus intended for analyzing an organic medium potentially including defects within a noisy structure. Ultrasound signals focused at a given depth according to M distinct successive excitations are emitted and an image formation module makes it possible to obtain an image of said depth after reception of responses from the medium. The invention is such that the apparatus includes a module for using said responses for constructing a rectangular response matrix of dimension N\*M, a coefficient  $K_{nm}$  of which represents the response from the medium received by the transducer n following an excitation m, decomposing said response matrix into singular values, using the singular vectors corresponding to said singular values for locating singular zones corresponding to defects in the medium. Application: Ultrasonic apparatus particularly in the medical field.

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